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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,064	12/27/2000	Stephen W. Day	D7751	5643

7590 03/13/2003

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EXAMINER

VO, HAI

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/749,064

Applicant(s)

DAY ET AL.

Examiner

Hai Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 22-26 and 39-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 22-26, 39 and 40 is/are allowed.
- 6) ☐ Claim(s) 41 and 43-68 is/are rejected.
- 7) ☐ Claim(s) 42 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 27 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 6) ☐ Other:

1. Claims 1-21, 27-38 have been cancelled in the amendment received on 01/06/2003.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 41, 43-46, 48-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day (US 5,834,082) in view of Mead et al (US 4,380,253). Day teaches a reinforced foam core panel having opposite sides formed by skins, comprising a plurality of foam boards interposed between opposite skins and plurality of web sheets (figures 35, and 38-40). Day discloses a billet being produced with low density, closed cell foam board (column 5, line 15 and claim 1). Day discloses the thin, porous, fibrous webs being wrapped around each foam pieces forming double layer webs (column 19, lines 46-49). Day fails to teach a layer of fibrous rovings continuously and helically surrounding each of the strips. Mead teaches a heat insulated hose comprising a layer a layer of fibrous rovings (6A, 6B, 6C) continuously and helically surrounding each of the foam strips (7A, 7B, 7C) (abstract, figure 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a layer of fibrous rovings continuously and helically surrounding each of the strips

motivated by the desire to increase the adhesion of the fiber layer to the foam strips, thereby increasing the strength of the panel.

With regard to claim 44, Day teaches the web sheets can be parallel spaced or adjacent porous bundles or rovings of continuous reinforcing fibers attached to one or both faces of the foam boards (figures 38-40, column 7, lines 49-51).

With regard to claim 45, Figure 39 of Day shows the foam strip having a triangular cross-sectional configuration.

With regard to claims 46, 49, and 50, Day teaches the foam strips and surrounding rovings are connected together prior to hardening the resin by skin members overlying the core surfaces (column 4, lines 15-25).

With regard to claim 48, Day further discloses the web sheets comprising intersecting filaments held in spaced relation from the core surface in a grid-like structure (figures 35, 38 and 40).

With regard to claim 51, figure 38 of Day reads on the claimed limitations.

With regard to claim 52, Day teaches the foam strips and surrounding rovings are connected together prior to hardening the resin by skin members overlying the core surfaces (column 4, lines 15-25). The skin member is itself a porous fiberglass fabric (column 8, lines 8-10).

With regard to claim 53, Day discloses the foam strips formed from polyvinyl chloride (column 2, lines 11-12). The skin member is itself a porous fiberglass fabric (column 8, lines 8-10).

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With regard to claim 54, figure 6 of Day shows an internal sheet of fibrous material 42.

With regard to claim 55, figure 35 of Day illustrates the presence of internal sheet **399** extending within the core and parallel to opposite core surfaces.

4. Claims 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Day (US 5,834,082) in view of Mead et al (US 4,380,253) as applied to claim 41 above, further in view of EP 672 805. Day teaches the porous strips being stitched to the skins and being secured to the foam pieces by staples (column 9, line 14 and column 19, lines 51-53). The combination of the primary and secondary references is silent as to a plurality of rows of reinforcing struts extending through the webs and between the opposite core surfaces and struts comprising porous and fibrous rovings enclosed by the foam strips. EP'805 teaches a panel comprising at least two groups 11 of at least one slender body **12** extending between skin components **3, 4** and through the central core **2** (figure 1, page 3). EP'805 teaches the slender body made of a bundle of fibers and being enclosed by the foam core (pages 5 and 6). It would have been obvious to one having ordinary skill in the art at the time the invention was made to form a slender body enclosed by the foam core and extend it through the webs and between the opposite skins of Day motivated by the desire to substantially increase the strength of the panel.
5. Claims 57-61, 64-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day (US 5,834,082) in view of EP 672 805 as set forth in Paper no. 2.

6. Claims 62 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day (US 5,834,082) in view of EP 672 805, as applied to claim 57 above, further in view of Mead et al (US 4,380,253). Day teaches the web sheets can be parallel spaced or adjacent porous bundles or rovings of continuous reinforcing fibers attached to one or both faces of the foam boards (figures 38-40, column 7, lines 49-51). Day discloses the thin, porous, fibrous webs being wrapped around each foam pieces forming double layer webs (column 19, lines 46-49). Day fails to teach a layer of fibrous rovings continuously and helically surrounding each of the strips. Mead teaches a heat insulated hose comprising a layer of fibrous rovings (6A, 6B, 6C) continuously and helically surrounding each of the foam strips (7A, 7B, 7C) (abstract, figure 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a layer of fibrous rovings continuously and helically surrounding each of the strips motivated by the desire to increase the adhesion of the fiber layer to the foam strips, thereby increasing the strength of the panel.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory

double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b). Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 57-61 and 65 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 5,834,082 in view of EP 672 805 as substantially set forth in Paper no. 10.

Allowable Subject Matter

9. Claims 22-26, 39 and 40 are allowed.
10. Claim 42 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art teaches or suggests a core panel as defined in claim 42 and including a second layer of fibrous roving helically surrounding the first layer on each strip along the length thereof, and the rovings in the second layer extend helically in an opposite direction and cross the rovings in the first layer.

Response to Arguments

11. Applicant's arguments with respect to claims 41-56 have been considered but are moot in view of the new ground(s) of rejection.
12. The art rejections over Day (US 5,834,082) in view of EP 672 805 and Double Patenting rejections have been maintained for the following reasons. Applicants state that the claimed core structure with the webs and struts together

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substantially increases the compressive, bending and shear strength of the composite panel. However, Arguments are not commensurate in scope with the claims. Nothing in the claims is specific about the increasing compressive, bending and shear strength as argued by Applicants. The examiner suggests Applicants need to provide evidence or declarations to demonstrate that the composite panel of the present invention exhibits very important strength advantages. Further, Applicant needs to include the strength limitations in the claims to overcome the finding of obviousness.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,197,928 to Mishima et al discloses a power transimisson belt having a belt body defining laterally spaced, oppositely facing flank surfaces and a least one fiber within the belt body and extending in a lateral direction. The fiber has a flared surface exposed at least one of the flank surfaces.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on Tue-Fri, 8:30-6:00 and on alternating Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned

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are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

HV
March 9, 2003



FERREL MORRIS
SUPERVISORY PATENT EXAMINER
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